

## **ABSTRACT**

A method of routing a packet in a routing device having a main processor that includes a main cache table and an instant cache table is disclosed. The instant cache stores a recent address and a recent interface associated with the most recent packet transmission process made by the routing device. The method includes the steps of receiving a packet that includes its destination address, checking whether the destination address belongs to the routing device, checking whether the destination address is identical to the recent address if the destination address does not belong to the routing device, and transmitting the packet to the recent interface if the destination address is identical to the recent address. As a result, the core information related to the routing path determination is stored not only in the routing table of the protocol layer but also in the main and instant cache tables included in the main processor. Since the selection of the routing path for a given packet depends on the individual characteristic of the packet, the data processing time of the packet is greatly reduced. Consequently, the routing performance of the routing device is greatly enhanced.